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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,276	11/16/2005	Morgan Larsson	1807-0185PUS1	9416

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EXAMINER	
EWALD, MARIA VERONICA	

ART UNIT	PAPER NUMBER
1791	

NOTIFICATION DATE	DELIVERY MODE
10/22/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/538,276	LARSSON ET AL.	
	Examiner	Art Unit	
	Maria Veronica D. Ewald	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/10/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 3 – 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As written, claim 3, lines 2 – 3 recites the limitation "means for maintaining the pressure conditions inside the casing is a column of powder in the powder dispenser." There is insufficient antecedent basis for this limitation in the claim; previous mention of any means in claim 2 is a "means for preventing the powder dispenser's contact with the surroundings." It is unclear whether the means for maintaining the pressure conditions is the same as the means for preventing the powder's dispenser's contact with the surroundings or is a separate structure. Appropriate clarification and/or correction is necessary.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Feygin, et al. (U.S. 5,637,175). Feygin, et al. teach an arrangement for the production of a three-dimensional product which arrangement comprises a work bench on which the said three-dimensional product is to be constructed (item 16 – figure 2), a powder dispenser which is arranged to apply a thin layer of powder onto the work bench to create a powder bed (column 23, lines 5 – 15), an irradiation gun for transmitting energy to the powder so that melting of the powder takes place (item 7 – figure 2; column 23, lines 42 – 55), the arrangement comprising a casing within which the pressure is reduced in relation to the atmospheric pressure and within which the work bench and the irradiation gun are located (figure 2; column 23, lines 35 – 55), characterized in that the powder dispenser, or a supply pipe connected to the powder dispenser is arranged partially outside the casing (figures 2 and 2A); wherein there are means for preventing the powder dispenser's contact with the surroundings affecting the pressure conditions inside the casing (item 11 – figure 2; column 23, lines 5 – 15); wherein the means for maintaining the pressure conditions inside the casing is a column of powder in the powder dispenser (item 12 – figure 2).

Claims 1 – 2 and 5 – 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Forderhase, et al. (U.S. 5,252,264). Forderhase, et al. teach an arrangement for the production of a three-dimensional product which arrangement comprises a work bench on which the said three-dimensional product is to be constructed (item 6 – figure 4), a powder dispenser which is arranged to apply a thin layer of powder onto the work bench

to create a powder bed (item 20 – figure 2), an irradiation gun for transmitting energy to the powder so that melting of the powder takes place (item 10 – figure 2), the arrangement comprising a casing within which the pressure is reduced in relation to the atmospheric pressure and within which the work bench and the irradiation gun are located (item 2 – figures 1 and 2; column 5, lines 1 – 20), characterized in that the powder dispenser, or a supply pipe connected to the powder dispenser is arranged partially outside the casing (item 40 – figures 5 and 6; column 11, lines 15 – 40); wherein there are means for preventing the powder dispenser's contact with the surroundings affecting the pressure conditions inside the casing (column 11, lines 1 – 15); wherein there is a first chamber which encloses the work bench (item 25 – figure 6; column 5, lines 25 – 35), and a second chamber which encloses the irradiation gun (figure 6; column 6, lines 13 – 30), the chambers being located inside the casing and connected to each other via a duct (item 26 – figure 4; column 5, lines 25 – 35); wherein the powder dispenser is arranged in association with the first chamber (figure 6); wherein the apparatus is comprised of a supply device in the form of a container with compartments which can be moved so that powder can be supplied to the powder dispenser from the different compartments (column 11, lines 1 – 40; column 13, lines 35 – 50).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feygin, et al. Feygin, et al. teach the characteristics previously described but do not teach that the column of powder is 1000 mm. However, monitoring the amount of powder to be maintained within the dispenser is within the level of one of ordinary skill in the art and is a variable that is controlled and thus, can be optimized. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Because the entire system is controlled externally to monitor the fabrication of the three-dimensional object and the variables associated with the process such as laser position/control, atmosphere and temperature, controlling the level of powder ensures that there is enough supply to maintain smooth operation without having to cease fabrication of the object and ensures that enough powder is being recycled back to the dispenser.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to configure the apparatus of Feygin, et al. such that the column of powder is maintained at 1000 mm for the purpose of ensuring that there is adequate powder supply to complete fabrication of the object without having to discontinue operation to reload the dispenser.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YOGENDRA N. GUPTA/
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

MVE